DEPARTMENT OF TRANSPORTATION

Revision: 7b
Date: 10/28/1998

FEDERAL AVIATION ADMINISTRATION

WASHINGTON, D. C.

M A S T E R M I N I M U M E Q U I P M E N T L I S T

CESSNA MODELS 414, 421 AND 421C(PISTON)

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CESSNA MODELS 414/421/421C(PISTON)

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Highlights of Change

This revision adds relief for Vortex Generators installed in accordance with STC SA00074SE. Relief is for missing or damaged Vortex Generators.

Distinction is made between CE-421C(Piston engine) and CE-421C(Turboprop) aircraft for clarification purposes.

CESSNA MODELS 414/421/421C(PISTON)

Definitions

1. System Definitions.

System numbers are based on the Air Transport Association (ATA) Specification Number 100 and items are numbered sequentially.

a. "Item" (Column 1) means the equipment, system, component, or function listed in the "Item" column.

b. "Number Installed" (Column 2) is the number (quantity) of items normally installed in the aircraft. This number represents the aircraft configuration considered in developing this MMEL. Should the number be a variable (e.g., passenger cabin items) a number is not required.

c. "Number Required for Dispatch" (Column 3) is the minimum number (quantity) of items required for operation provided the conditions specified in Column 4 are met.

NOTE: Where the MMEL shows a variable number required for dispatch, the MEL must reflect the actual number required for dispatch or an alternate means of configuration control approved by the Administrator.

d. "Remarks or Exceptions" (Column 4) in this column includes a statement either prohibiting or permitting operation with a specific number of items inoperative, provisos (conditions and limitations) for such operation, and appropriate notes.

e. A vertical bar (change bar) in the margin indicates a change, addition or deletion in the adjacent text for the current revision of that page only. The change bar is dropped at the next revision of that page.

2. "Airplane/Rotorcraft Flight Manual" (AFM/RFM) is the document required for type certification and approved by the responsible FAA Aircraft Certification Office. The FAA approved AFM/RFM for the specific aircraft is listed on the applicable Type

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Certificate Data Sheet.

3. "As required by FAR" means that the listed item is subject to certain provisions (restrictive or permissive) expressed in the Federal Aviation Regulations operating rules. The number of items required by the FAR must be operative. When the listed item is not required by FAR it may be inoperative for time specified by repair category.

4. Each inoperative item must be placarded to inform and remind the crewmembers and maintenance personnel of the equipment condition.

NOTE: To the extent practical, placards should be located adjacent to the control or indicator for the item affected; however, unless otherwise specified, placard wording and location will be determined by the operator.

5. "-" symbol in Column 2 and/or Column 3 indicates a variable number (quantity) of the item installed.

6. "Deleted" in the remarks column after a sequence item indicates that the item was previously listed but is now required to be operative if installed in the aircraft.

7. "ER" refers to extended range operations of a two-engine airplane which has a type design approval for ER operations and complies with the provisions of Advisory Circular 120-42A.

8. "Federal Aviation Regulations" (FAR) means the applicable portions of the Federal Aviation Act and Federal Aviation Regulations.

9. "Flight Day" means a 24 hour period (from midnight to midnight) either Universal Coordinated Time (UCT) or local time, as established by the operator, during which at least one flight is initiated for the affected aircraft.

10. "Icing Conditions" means an atmospheric environment that may cause ice to form on the aircraft or in the engine(s).

11. Alphabetical symbol in Column 4 indicates a proviso (condition or limitation) that must be complied with for

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operation with the listed item inoperative.

12. "Inoperative" means a system and/or component malfunction to the extent that it does not accomplish its intended purpose and/or is not consistently functioning normally within its approved operating limit(s) or tolerance(s).

13. "Notes:" in Column 4 provides additional information for crewmember or maintenance consideration. Notes are used to identify applicable material which is intended to assist with compliance, but do not relieve the operator of the responsibility for compliance with all applicable requirements. Notes are not a part of the provisos.

14. Inoperative components of an inoperative system: Inoperative items which are components of a system which is inoperative are usually considered components directly associated with and having no other function than to support that system. (Warning/caution systems associated with the inoperative system must be operative unless relief is specifically authorized per the MMEL).

15. "(M)" symbol indicates a requirement for a specific maintenance procedure which must be accomplished prior to operation with the listed item inoperative. Normally these procedures are accomplished by maintenance personnel; however, other personnel may be qualified and authorized to perform certain functions. Procedures requiring specialized knowledge or skill, or requiring the use of tools or test equipment should be accomplished by maintenance personnel. The satisfactory accomplishment of all maintenance procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as part of the operator's manual or MEL.

16. "(O)" symbol indicates a requirement for a specific operations procedure which must be accomplished in planning for and/or operating with the listed item inoperative. Normally these procedures are accomplished by the flight crew; however, other personnel may be qualified and authorized to perform certain functions. The satisfactory accomplishment of all procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are

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required to be published as a part of the operator's manual or MEL.

NOTE: The (M) and (O) symbols are required in the operator's MEL unless otherwise authorized by the Administrator.

17. "Deactivated" and "Secured" means that the specified component must be put into an acceptable condition for safe flight. An acceptable method of securing or deactivating will be established by the operator.

18. "Visual Flight Rules" (VFR) is as defined in FAR Part 91. This precludes a pilot from filing an Instrument Flight Rules (IFR) flight plan.

19. "Visual Meteorological Conditions" (VMC) means the atmospheric environment is such that would allow a flight to proceed under the visual flight rules applicable to the flight. This does not preclude operating under Instrument Flight Rules.

20. "Visible Moisture" means an atmospheric environment containing water in any form that can be seen in natural or artificial light; for example, clouds, fog, rain, sleet, hail, or snow.

21. "Passenger Convenience Items" means those items related to passenger convenience, comfort or entertainment such as, but not limited to, galley equipment, movie equipment, ash trays, stereo equipment, overhead reading lamps, etc.

22. Repair Intervals: All users of an MEL approved under FAR 121, 125, 129 and 135 must effect repairs of inoperative systems or components, deferred in accordance with the MEL, at or prior to the repair times established by the following letter designators:

Category A. Items in this category shall be repaired within the time interval specified in the remarks column of the operator's approved MEL.

Category B. Items in this category shall be repaired within three (3) consecutive calendar days (72 hours), excluding the day the malfunction was recorded in the aircraft maintenance

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record/logbook. For example, if it were recorded at 10 a.m. on January 26th, the three day interval would begin at midnight the 26th and end at midnight the 29th.

Category C. Items in this category shall be repaired within ten (10) consecutive calendar days (240 hours), excluding the day the malfunction was recorded in the aircraft maintenance record/logbook. For example, if it were recorded at 10 a.m. on January 26th, the 10 day interval would begin at midnight the 26th and end at midnight February 5th.

Category D. Items in this category shall be repaired within one hundred and twenty (120) consecutive calendar days (2880 hours), excluding the day the malfunction was recorded in the aircraft maintenance log and/or record.

The letter designators are inserted adjacent to Column 2.

23. Electronic fault alerting system - General

New generation aircraft display system fault indications to the flight crew by use of computerized display systems. Each aircraft manufacturer has incorporated individual design philosophies in determining the data that would be represented. The following are customized definitions (specific to each manufacturer) to help determine the level of messages affecting the aircraft's dispatch status. When preparing the MEL document, operators are to select the proper Definition No. 23 for their aircraft, if appropriate.

a. BOEING (B-757/767, B-747-400, B-777)

Boeing airplanes equipped with Engine Indicating and Crew Alerting Systems (EICAS), provide different priority levels of system messages (WARNING, CAUTION, ADVISORY, STATUS and MAINTENANCE). Any messages that affects airplane dispatch status will be displayed at a STATUS message level or higher. The absence of an EICAS STATUS or higher level (WARNING, CAUTION, ADVISORY) indicates that the system/component is operating within its approved operating limits or tolerances.

System conditions that result only in a maintenance level message, i.e. no correlation with a higher level EICAS message,

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Fokker aircraft are equipped with Multi Function Display System (MFDS) which provides electronic message referring to the different priority levels of system information (WARNING (red), CAUTION (amber), AWARENESS (cyan) AND STATUS (white). Any messages that affects aircraft dispatch will be at the WARNING, CAUTION or AWARENESS level. In these cases the MEL must be verified for dispatch capability and maintenance may be required.

System conditions that only require maintenance are not presented on the flight deck. These maintenance indications/messages may be presented on the Maintenance & Test Panel (MAP) or the Centralized Fault Display Unit (CFDU) and by dedicated Built In Test Evaluation (BITE) of systems.

24. "Administrative control item" means an item listed by the operator in the MEL for tracking and informational purposes. It may be added to an operator's MEL by approval of the Principal Operations Inspector provided no relief is granted, or provided conditions and limitations are contained in an approved document (i.e. Structural Repair Manual, airworthiness directive, etc.). If relief other than that granted by an approved document is sought for an administrative control item, a request must be submitted to the Administrator. If the request results in review and approval by the FOEB, the item becomes an MMEL item rather than an administrative control item.

25. "***" symbol in Column 1 indicates an item which is not required by regulation but which may have been installed on some models of aircraft covered by this MMEL. This item may be included on the operator's MEL after the approving office has determined that the item has been installed on one or more of the operator's aircraft. The symbol, however, shall not be carried forward into the operator's MEL. It should be noted that neither this policy nor the use of this symbol provide authority to install or remove an item from an aircraft.

26. "Excess Items" means those items that have been installed that are redundant to the requirements of the FARs.

27. "Day of Discovery" is the calendar day an equipment/instrument malfunction was recorded in the aircraft

maintenance log and or record. This day is excluded from the calendar days or flight days specified in the MMEL for the repair of an inoperative item of equipment. This provision is applicable to all MMEL items, i.e., categories "A, B, C, and D."

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Preamble
(Effective 6/14/89)

The following is applicable for authorized certificate holders operating under Federal Aviation Regulations (FAR) Parts 121, 125, 129, 135: The FAR require that all equipment installed on an aircraft in compliance with the Airworthiness Standards and the Operating Rules must be operative. However, the Rules also permit the publication of a Minimum Equipment List (MEL) where compliance with certain equipment requirements is not necessary in the interests of safety under all operating conditions. Experience has shown that with the various levels of redundancy designed into aircraft, operation of every system or installed component may not be necessary when the remaining operative equipment can provide an acceptable level of safety. A Master Minimum Equipment List (MMEL) is developed by the FAA, with participation by the aviation industry, to improve aircraft utilization and thereby provide more convenient and economic air transportation for the public. The FAA approved MMEL includes those items of equipment related to airworthiness and operating regulations and other items of equipment which the Administrator finds may be inoperative and yet maintain an acceptable level of safety by appropriate conditions and limitations; it does not contain obviously required items such as wings, flaps, and rudders. The MMEL is the basis for development of individual operator MELs which take into consideration the operator's particular aircraft equipment configuration and operational conditions. Operator MELs, for administrative control, may include items not contained in the MMEL; however, relief for administrative control items must be approved by the Administrator. An operator's MEL may differ in format from the MMEL, but cannot be less restrictive than the MMEL. The individual operator's MEL, when approved and authorized, permits operation of the aircraft with inoperative equipment.

Equipment not required by the operation being conducted and equipment in excess of FAR requirements are included in the MEL with appropriate conditions and limitations. The MEL must not deviate from the Aircraft Flight Manual Limitations, Emergency Procedures or with Airworthiness Directives. It is important to remember that all equipment related to the airworthiness and the operating regulations of the aircraft not listed on the MMEL must be operative.

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Preamble
(Effective 6/14/89)

Suitable conditions and limitations in the form of placards, maintenance procedures, crew operating procedures and other restrictions as necessary are specified in the MEL to ensure that an acceptable level of safety is maintained.

The MEL is intended to permit operation with inoperative items of equipment for a period of time until repairs can be accomplished. It is important that repairs be accomplished at the earliest opportunity. In order to maintain an acceptable level of safety and reliability the MMEL establishes limitations on the duration of and conditions for operation with inoperative equipment. The MEL provides for release of the aircraft for flight with inoperative equipment. When an item of equipment is discovered to be inoperative, it is reported by making an entry in the Aircraft Maintenance Record/Logbook as prescribed by FAR. The item is then either repaired or may be deferred per the MEL or other approved means acceptable to the Administrator prior to further operation. MEL conditions and limitations, do not relieve the operator from determining that the aircraft is in condition for safe operation with items of equipment inoperative.

When these requirements are met, an Airworthiness Release, Aircraft Maintenance Record/Logbook entry, or other approved documentation is issued as prescribed by FAR. Such documentation is required prior to operation with any item of equipment inoperative.

Operators are responsible for exercising the necessary operational control to ensure that an acceptable level of safety is maintained. When operating with multiple inoperative items, the interrelationships between those items and the effect on aircraft operation and crew workload will be considered.

Operators are to establish a controlled and sound repair program including the parts, personnel, facilities, procedures, and schedules to ensure timely repair.

WHEN USING THE MEL, COMPLIANCE WITH THE STATED INTENT OF THE PREAMBLE, DEFINITIONS, AND THE CONDITIONS AND LIMITATIONS SPECIFIED IN THE MEL IS REQUIRED.

CESSNA MODELS 414/421/421C(PISTON)

Guidelines for (O) & (M) Procedures

21.2 (M) Maintenance procedure to ensure the valve is blocked in the open position.

21.8 (M) Maintenance procedure to ensure no fuel leak or mechanical or electrical fault exists.

21.10 (M) Maintenance procedure to ensure no hydraulic leaks or mechanical problem exists that could have an adverse affect.

21.11 (O) Operations procedure to record heater time.

22.1 (M) Maintenance procedure to ensure no electrical or mechanical fault exists that will have any adverse affect on any flight control function.

22.2 (M) Maintenance procedure to ensure no electrical or mechanical fault exists that will have any adverse affect on any flight control function.

27.5 (O) Operations procedure to determine compliance with STC limitations.

27.3 (M) Maintenance procedure to ensure failure of electric trim will not interfere with operation of manual trim.

28.2 (O) Operations procedure to determine fuel quantity on board meets the regulatory requirements for the intended flight.

31.2 (O) Operations procedure to record elapsed flight time.

32.1 (O) Operations procedure to prevent movement of the aircraft when stopped or parked.

33.9 (O) Operations procedure to appropriately brief the passengers.

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Guidelines for (O) & (M) Procedures

34-18 (M)Maintenance procedure to deactivate and secure the system.

34-19-1 (M)Maintenance procedure to deactivate and secure the system.

-2 (O)Operations procedure to ensure TA and RA display is visible to the non-flying pilot and audio functions are operative on flying pilot side.

-3 (O)Operations procedure to ensure non-flying pilot monitors pilot's display.

(O)Operations procedure to TA ONLY mode is selected and all TA functions/elements are operative.

-4 (O)Operations procedure to ensure all RA display/functions are operative.

34-20-1 (O)Operations procedure to ensure alternatives are established and used for the appropriate inoperative mode(s).

-4 (O)Operations procedure to ensure alternatives are established and used for the appropriate inoperative advisory callout(s).

-5 (O)Operations procedure to ensure alternative is established and used for the windshear mode.

34-21-1,2,3,6 (O)Operations procedure to ensure pilot awareness of altitude vs terrain clearance.

37-1 (M) Maintenance procedure to ensure no unsafe condition exists which could affect engine or system function.

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21 AIR CONDITIONING				
1. Cabin Pressurization System	C	1	0	May be inoperative for unpressurized flight.
2. Cabin Dump Valve	C	1	0	(M)May be inoperative provided the Cabin Dump Valve is secured in the open position.
3. Cabin Differential Pressure Indicator	C	1	0	May be inoperative provided: a) Cabin Rate of Climb Indicator is operative and b) Cabin Altitude Indicator is operative. OR
	C	1	0	May be inoperative for unpressurized flight.
4. Cabin Altitude Indicator	C	1	0	May be inoperative provided: a) Cabin Rate of Climb is operative and b) Cabin Differential Pressure Indicator is operative. OR
	C	1	0	May be inoperative for unpressurized flight.

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING				
5. Cabin Rate of Climb Indicator	C	1	0	May be inoperative provided: a) Cabin Differential Pressure Indicator is operative and b) Cabin Altitude Indicator operative. OR
	C	1	0	May be inoperative for unpressurized flight.
6. Cabin Altitude Control	C	1	0	May be inoperative for unpressurized flight.
7. Cabin Altitude Warning System	C	1	0	May be inoperative for unpressurized flight. OR
	C	1	0	May be inoperative for pressurized flight at or below 10,000 ft. msl.
8. Heater	C	1	0	(M)
9. Heater Fan	C	1	0	May be inoperative provided: a) The heater or windshield defogging is not operated on the ground and b) Heater is turned OFF prior to landing.
10. Air Conditioning System	C	1	0	(M)
11. Heater Hour Meter	C	1	0	(O)

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22 AUTO FLIGHT				
1. Autopilot	C	1	0	(M)As required by FAR. NOTE: See AFM supplement for possible flap use restriction.
2. Yaw Damper	C	1	0	(M)May be inoperative provided yaw damper is independent of and unrelated to autopilot operation or the autopilot is not used. NOTE: See AFM supplement for possible yaw damper vs. autopilot operating instructions.

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23 COMMUNICATIONS				
1. Communications Equipment (VHF, HF, UHF)	C	-	-	As required by FAR.
2. Audio Amplifier				Deleted, Rev. 6
3. Cockpit Speaker	C	1	0	May be inoperative provided two operative headsets are available to the flight crew.
4. Cockpit Voice *** Recorder (CVR)	A	1	0	May be inoperative provided repairs are made within three flight days.
5. Passenger Address *** System				
1. Passenger Configuration	B	1	0	(O)May be inoperative provided alternate, normal and emergency procedures, and/or operating restrictions are established and used.
2. Cargo Configuration	D	1	0	

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24 ELECTRICAL POWER				
1. Volt/Ammeter (selectable)				Deleted, Rev. 6
2. Alternator Out Caution Lights				Deleted, Rev. 6
3. Voltage Regulators (selectable)	B	2	1	One may be inoperative for day VFR.
4. Low Voltage Warning light	B	1	0	

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS				
1. Cockpit Shoulder Harnesses	C	2	1	Right side may be inoperative provided seat is not occupied.
2. Passenger Seat	C	-	0	All may be inoperative provided: a) Affected seat does not block emergency egress to the aisle or exit and b) Affected seat is blocked and placarded "DO NOT OCCUPY". NOTE: 1. A seat with an inoperative seat belt or shoulder harness is considered to be inoperative. 2. A seat with an inoperative recline mechanism is considered to be inoperative if the seat back cannot be secured in the upright position.
3. Flotation Devices	C	-	0	Any in excess of those required by FAR may be inoperative or missing.
4. Emergency Locator Transmitter (ELT)	C	1	0	As required by FAR. OR
	C	1	0	May be inoperative for published scheduled flights in scheduled air carrier service.

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS				
5. Passenger Convenience Items		-	-	Passenger convenience items, as expressed in this MMEL, are those related to passenger convenience, comfort or entertainment such as but not limited to, galley equipment, movie equipment, ash trays, stereo equipment, overhead reading lamps, etc. Items addressed elsewhere in this document shall not be included. (M) and (O) procedures may be required and included in the air carrier's appropriate document.
6. First Aid Kits	D	-	-	Any in excess of those required by FAR may be incomplete or missing provided required distribution is maintained.
7. Emergency Medical *** Equipment (EMS)	C	-	0	May be inoperative provided the system is deactivated and secured. (M) and (O) procedures may be required and included in carrier's appropriate document.

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
26 FIRE PROTECTION				
1. Portable Fire Extinguisher	D	-	-	Any in excess of those required by FAR may be inoperative or missing provided: a) The inoperative fire extinguisher is tagged inoperative, removed from the installed location, and placed out of sight so it can not be mistaken for a functional unit, and b) Required distribution is maintained.
2. Fire Detection *** and Extinguishing Equipment	C	1	0	

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
27 FLIGHT CONTROLS				
1. Wing Flap System				Deleted, Rev. 6
2. Wing Flap Position Indicator	C	1	0	May be inoperative provided: a) A notch or detent position preselect feature is part of the flap switch, b) Flaps are visually checked for full travel and flap operation is not affected and c) Flaps are visually checked full up prior to each departure.
3. Electric Elevator Trim System	C	1	0	(M)May be inoperative provided manual trim is operative and unaffected.
4. Trim Tab Position Indicators Rudder, Aileron, and Elevator	C	3	0	May be inoperative provided: a) Tab is checked for full range of operation. b) Tab operation is not affected and c) Tab is positioned to neutral prior to each departure and neutral is verified by visual inspection.
5. Vortex Generators *** (STC SA00074SE)	C	-	96	(O)Four or less may be broken or missing.
		-	94	(O)Five or six may be broken or missing provided the aircraft is flown in accordance with original markings, placards and the airplane flight manual. Note: If more than six vortex generators are broken or missing, the aircraft is not airworthy and must be repaired

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28 FUEL				
1. Fuel Low Level Warning Lights	C	2	0	
2. Fuel Quantity Indicators	C	2	1	(O)One may be inoperative provided a reliable means is established to determine that fuel quantity on board meets the regulatory requirements for the intended flight.
3. Fuel Totalizer	C	1	0	

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
29 HYDRAULIC POWER				
1. Hydraulic Flow Caution Lights	C	2	1	One may be inoperative.

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
30 ICE AND RAIN PROTECTION				
1. Pitot Heater	B	-	0	Left Pitot Heater must be operative for IFR passenger carrying and for flight in known or forecast icing conditions. Two heated pitot tubes are required for these conditions if a second airspeed indicator is installed and operative.
2. Surface Deicing System (Wing, Vertical and Horizontal Stabilizer)	C	1	0	May be inoperative provided aircraft is not operated in known or forecast icing conditions.
3. Electric Windshield Anti-ice	C	1	0	May be inoperative provided aircraft is not operated in known or forecast icing conditions.
4. Propeller Deicing/Anti-icing Systems	C	2	0	May be inoperative provided aircraft is not operated in known or forecast icing conditions.
5. Stall Warning/ Angle of Attack Heater	C	1	0	May be inoperative provided aircraft is not operated in known or forecast icing conditions.
6. Wing Locker Fuel Tank Vent Heaters	C	2	0	May be inoperative provided aircraft is not operated in known or forecast icing conditions.
7. Alcohol Windshield Deice System	C	1	0	May be inoperative provided aircraft is not operated in known or forecast icing conditions.
8. Static Port Heater	C	1	0	May be inoperative provided aircraft is not operated in known or forecast icing conditions.

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
31 INDICATING/RECORDING SYSTEMS				
1. Clock with sweep second hand, or electric digital clock	C	1	0	May be inoperative for VFR operations
2. Flight Hour Recorder	C	1	0	(O)

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MASTER MINIMUM EQUIPMENT LIST

FEDERAL AVIATION ADMINISTRATION

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
32 LANDING GEAR				
1. Parking Brake	C	1	0	(O)

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS				
1. Anti-collision Light System	B	1	0	May be inoperative for day operations.
2. Strobe Light System	C	1	0	
3. Position Lights	C	3	0	May be inoperative for day operations.
4. Cockpit/ Flight Deck/ Flight Compartment and Instrument Lighting System	C		-	Individual lights may be inoperative provided remaining lights are: a) Sufficient to clearly illuminate all required instruments, controls, and other devices for which it is provided, b) Positioned so that direct rays are shielded from flight crewmembers eyes, and c) Lighting configuration and intensity is acceptable to the flight crew.
5. Ice Detection Lights	C	2	0	May be inoperative provided a portable lamp/light of adequate capacity for wing and/or control surface inspection is available for night operations in icing conditions.
6. Cabin Light System(s)	C	-	-	May be inoperative provided lighting configuration is acceptable to the flight crew.

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS				
7. Landing Lights	C	2	0	May be inoperative for day operations.
				OR
	C	2	1	One may be inoperative.
8. Taxi Light	C	1	0	
9. No Smoking/Fasten Seat Belt Sign	C	1	0	(O)May be inoperative provided appropriate verbal briefings are given to passengers.
10. Logo Lights	C	2	0	

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION				
1. Altimeters Barometric Pressure (Adjustable)	B	-	1	May be inoperative on right side. NOTE: Where a servoed electric altimeter is installed, a functioning pneumatic indicator is required.
2. Airspeed Indicators	C	-	1	May be inoperative on right side. NOTE: Where a servoed electric airspeed is installed, a functioning pneumatic indicator is required.
3. Gyroscopic Pitch and Bank Indicators	B	-	1	May be inoperative on right side.
4. Gyroscopic Directional Indicators	B	-	1	May be inoperative on right side.
5. Gyroscopic Rate of Turn/Slip Skid Indicators	B	-	0	May be inoperative on right side. May be inoperative on left side except for IFR, passenger carrying VFR over-the-top, and passenger carrying VFR night flights.
6. Vertical Speed Indicator	B	-	0	May be inoperative on left side except for IFR passenger carrying operations.
7. Flight Director	C	1	0	
8. Altitude *** Alert/Preselect	B	1	0	
9. Radio Altimeter	C	1	0	

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION				
10. ATC Transponders and Automatic Altitude Reporting Systems	D	-	-	Any in excess of those required by FAR may be inoperative.
11. Weather Radar/ Thunderstorm Detection Equipment	C	1	0	As required by FAR.
12. Navigation Equipment (VOR/ILS, Loran, Omega/VLF, GPS INS, Doppler, RNAV)	C	-	-	As required by FAR.
13. DME	C	-	0	As required by FAR.
14. RMI	C	-	0	
15. ADF	C	-	0	As required by FAR.
16. Marker Beacon	C	-	0	

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION				
17. Nonstabilized Magnetic Compass	B	1	0	May be inoperative provided any combination of three gyro or INS (IRU) stabilized compass systems are operative. OR
	B	1	O	May be inoperative provided: a) Any combination of two gyro or INS stabilized compass systems are operative and b) Aircraft is operated with dual independent navigation capability and under positive radar control by ATC on the enroute portion of the flight. OR
	B	1	0	May be inoperative for flights that are entirely within areas of magnetic unreliability provided at least two stabilized directional gyro systems are installed, operative, and used in conjunction with approved free gyro navigation techniques.

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION				
18. Traffic Alert *** Collision Avoidance System I (TCAS I)	C	1	0	(M)May be inoperative provided the system is deactivated and secured.
19. Traffic Alert *** Collision Avoidance System (TCAS II)				
1) TCAS System	C	-	0	(M)May be inoperative provided the system is deactivated and secured.
2) Combined TA and *** RA Dual Displays	C	2	1	(O)May be inoperative on the non-flying pilot side provided: a) TA and RA elements and audio functions are operative on flying pilot side and b) TA and RA display indications are visible to the non-flying pilot.
3) Resolution (RA) Display System(s)	C	2	1	(O)One may be inoperative on non-flying pilot side.
	C	-	0	(O)May be inoperative provided: a) All Traffic Alert (TA) display elements and voice command audio functions are operative and b) TA only mode is selected by the crew.
4) TA Display System(s)	C	0		(O)May be inoperative provided all installed RA display and audio functions are operative.

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION				
20. Ground Proximity *** Warning System				
1. Modes 1-4	A	-	0	(O)May be inoperative provided a) Alternate procedures are established and used and b) Repairs are made within two flight days.
2. Test Mode	A	1	0	May be inoperative provided: a) The GPWS is considered inoperative and b) Repairs are made within two flight days.
3. Glideslope Deviation (Mode 5)	B	2	0	
4. Advisory *** Callouts	C	-	0	(O)May be inoperative provided alternate procedures are established and used.
5. Windshear Mode ***	C	-	0	(O)May be inoperative provided alternate procedures are established and used.

SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION				
21. Flight Profile				
*** Advisory System				
1) Gear Mode	A	1	0	(O)May be inoperative provided: a) Alternate procedures are established and used and b) Repairs are made within two flight days.
2) Minimums Mode	A	1	0	(O)May be inoperative provided: a) Alternate procedures are established and used and b) Repairs are made within two flight days.
3) Radio Altitude Mode	A	1	0	(O)May be inoperative provided: a) Alternate procedures are established and used and b) Repairs are made within two flight days.
4) Test Mode	A	1	0	May be inoperative provided: a) The FPA is considered inoperative and b) Repairs are made within two flight days.
5) Glideslope Deviation Mode	B	1	0	
6) Advisory Callouts	C	-	0	(O)May be inoperative provided alternate procedures are established and used.

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
35 OXYGEN				
1. Oxygen System (Passengers)	C	-	-	As required by FAR.

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
37 VACUUM/PRESSURE				
1. Vacuum Pumps	C	2	1	(M)One may be inoperative for day VFR.

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
52 DOORS				
1. Pneumatic Door Seal	C	1	0	May be inoperative for unpressurized flight.
2. Cabin Door Warning Light	C	1	0	May be inoperative provided: a) A flight crewmember confirms by visual inspection that the cabin door is latched and secure prior to each departure and b) Fasten Seat Belt sign remains on, or passengers are verbally briefed prior to departure to remain seated with their seat belts fastened.

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
61 PROPELLERS				
1. Synchronizer/ Synchrophaser	C	1	0	
2. Unfeathering Accumulators	C	2	0	

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SYSTEM & SEQUENCE NUMBERS	Item 1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
77 ENGINE INDICATING				
1. Economy Mixture Indicators (EGT)	C	2	0	